Soundscape as intangible heritage:
A digital project to enhance the cultural identity of Modena (Italy)

SARA BELOTTI, ANGELA FIORE[74]

The paper deals with the creation of a digital platform through which to reconstruct and explore places, spaces, sounds and events who contributed to the soundscape of the city of Modena. With their social and cultural resources, over the centuries, cities have been a prerequisite for the growth of music production. At the same time, sound and music are essential elements in the landscape perception process. In this sense, the soundscape of a city and its historical development can be considered as a local intangible heritage to be enhanced and preserved.

During the 17th century, the ducal city of Modena became an important musical centre thanks to the Este court. Especially, during the two decades of Francesco II d'Este's reign (1674–94), music began to appear in public spaces as a tool for displaying the Duke's authority and became one of the main artistic languages of the city. The comparative study of sources of different types (historical maps, musical manuscripts, archival sources) grasps the multiform connections between court, city and territory, offering many details on the complex

---

[74] Sara Belotti, University of Modena and Reggio Emilia and University of Bergamo (Italy); Angela Fiore, Conservatorio 'A. Steffani', Castelfranco Veneto (Italy).

relationships between sound and space within the urban context.

To study the musical and cultural heritage concerning the urban context through an innovative approach, an online interactive map with digital resources has been created thanks to the use of Geographic Information Systems (GIS) (Fig. 1). For musicological research purposes, cartography is very useful for locating music production centres within the urban context, improving knowledge of places and music production and dissemination methods and above all understanding how geographical areas and musical expression have interacted with and influenced each other.

The map will allow the identification of the musical centres of the early modern Modena, to carry out advanced searches, to filter the data and to view the insights through pop-ups and hypertext links. For the creation of the digital map, the Google Satellite Web mapping service was used as a basis, on which an historical map of the collection of the Estense Library, was superimposed. In this way, the map will permit us to compare the XVII century territory to the contemporary one.

The platform is based on a relational database system, containing data derived from the analysis and study of musical, cartographic, historical, and archival sources. The database created in Django Framework is divided into interrelated entities called *Sources* (Fonti), *People* (Persone), *Genres* (Generi), *Events* (Eventi), and *Institutions* (Istituzioni). The database offers various possibilities for accessing the data: the free text search and browse resources, a search indices and a time slider.

The *Institutions* are the connecting element between the relational database system and the virtual map called EsteWebGis: each institution is georeferenced through the OpenStreetMap plug-in present in the database, showing the location of each institution on the map. Moreover, using

queries, it will be possible to filter and cross-reference data to obtain re-elaborations of the base map according to specific criteria (e.g.to discover which places of Modena hosted events linked to ceremonies of the Este House).

Additionally, clicking on the single institution an Informative pop-up that displays information regarding institutions and their musical activities will open (Fig. 2). From the pop-up, it is possible the direct access to the related musical sources.

In conclusion, the map can be a valid tool for analysing the artistic and spatial context of a city in a more general sense, but above all it enables to have new points of view to study a city and its historical and spectacular development, enhancing the architectural heritage, identifying the main places and institutions, and discovering new visit itineraries that can also be promoted from a tourist point of view. The project wants to propose a collaborative and multidisciplinary model for historical research, but also it will provide new ideas for the enhancement and the governance of cultural heritage and, more generally, of the city.
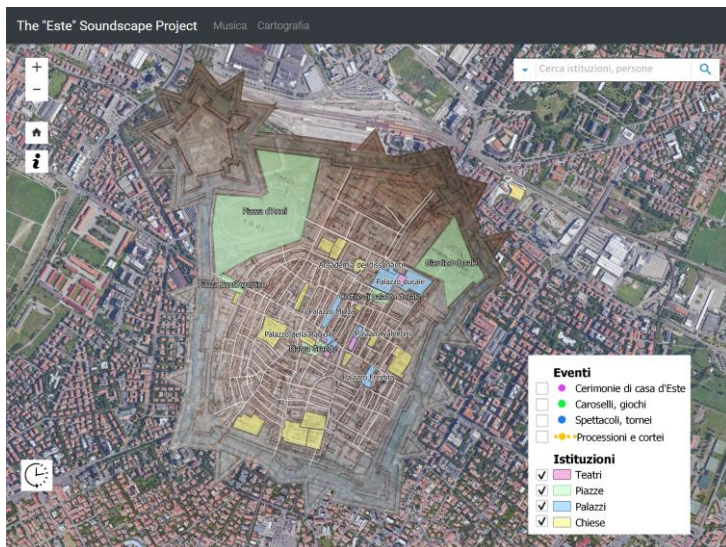
Fig. 1 – Este WebGis demo.
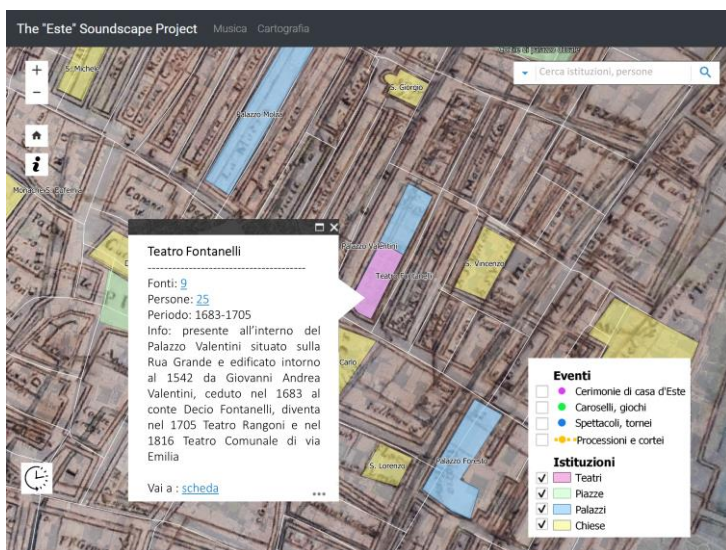*Source: Authors' elaboration*

Fig. 2 – Este WebGis: example of pop-up.
Source: Authors' elaboration

References

Crowther, V. (1992). *The Oratorio in Modena*. Oxford: Clarendon Press.

Dell'Agnese E., Tabusi M. (2016). Introduzione. In E. Dell'Agnese, M. Tabusi (Ed.), *La musica come geografia: suoni, luoghi, territori* (pp. 5-12). Roma: SGI.

Donattini, M. (2000). Cultura geografica ferrarese del Rinascimento. In A. Prosperi (Ed.), *Storia di Ferrara, vol. VI: Il Rinascimento. Situazioni e personaggi* (pp. 407-458). Ferrara: Corbo.

Fea, M., Loret E. (2010). Che cos'è un GIS. Esempi di applicazioni scientifiche. In S. Bozzato (Ed.), *GIS tra natura e tecnologia. Strumento per la didattica e la diffusione della cultura scientifica* (pp. 53-76). Roma: Carocci.

Fiore, A., Belotti, S. (2020). Merging Music and Landscape: un approccio digitale per lo studio dell'identità culturale della Modena estense. *Magazén*, 1(1), 75-100. doi:10.30687/mag//2020/01/004

Giuriati, G. (2015). Il suono come forma di conoscenza dello spazio che ci circonda. Una prospettiva musicologica. *Semestrale di studi e ricerche di geografia XXVII (2):115-128.*

Knighton, T., Mazuela-Anguita, A. (2018). *Hearing the city in early modern Europe*. Turnhout: Brepols.

Martinelli Braglia, G. (2007). Luoghi e artefici dello spettacolo nella Modena di Orazio Vecchi. In F. Taddei; A. Chiarelli (Ed.) *Il Theatro dell'udito. Società, Musica, Storia e Cultura nell'epoca di Orazio Vecchi*, edited (pp. 17-50). Modena: Mucchi.

Quaderni dell'Archivio Storico di Modena, XXIV (2009). *La 'Rappresentazione' della Città di Modena. Gian Battista Boccabadati Poeta, Letterato, Cartografo*. Modena: Archivio Storico di Modena.

Rocca, L. (2013). Le impronte del paesaggio sonoro: un'opportunità per la didattica della storia e della geografia. *Ri-Vista ricerche per la progettazione del paesaggio*, 11 (1), 17-25. Retrived from https://oaj.fupress.net/index.php/ri-vista/issue/view/215.

Salmson, J., Moretti, W. (Eds) (1984). *The Renaissance in Ferrara and its European Horizons. Rinascimento a Ferrara e i suoi orizzonti europei*. Ravenna: Edizioni del Girasole.

Vagnini, A. (2010). Il GIS come strumento dell'analisi storica. In S. Bozzato (Ed.), *GIS tra natura e tecnologia. Strumento per la didattica e la diffusione della cultura scientifica* (pp. 217-229). Roma: Carocci.